(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 5 February 2004 (05.02.2004)

(10) International Publication Number WO 2004/011556 A1

- (51) International Patent Classification7: G01N 33/58
- C09B 23/08,
- (74) Agents: HAMMER, Catriona, MacLeod et al.;
- (21) International Application Number:

PCT/GB2003/003196

- (22) International Filing Date: 28 July 2003 (28.07.2003)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0217556.0

10/241,333

11 September 2002 (11.09.2002)

- 30 July 2002 (30.07.2002) GB
- (71) Applicant (for all designated States except US): AMER-SHAM BIOSCIENCES UK LIMITED [GB/GB]; Amersham Place, Little Chalfont, Buckinghamshire HP7 9NA (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): COTTON, Graham [GB/GB]; Albachem Limited, Elvingston Science Centre, By Gladsmuir, Lothian EH33 1EH (GB).

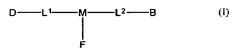
- Amersham plc, Amersham Place, Little Chalfont, Buckinghamshire HP7 9NA (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SITE-SPECIFIC LABELLING OF PROTEINS USING CYANINE DYE REPORTERS



(57) Abstract: Disclosed are compounds of formula (I):in which D is a dye selected from a cyanine dye or a derivative thereof; B is an affinity tag: F comprises a target bonding group selected from a carboxylic acid thioester group and a 1,2-aminothiol group; M is a group adapted for attaching to F; and L1 and L2 each independently comprise a group containing from 1 to 40 linked atoms selected from carbon atoms which may optionally include one or more groups selected from -NR' - . -O-, -CH=CH-, -CO-NH- and phenylenyl groups, where R' is selected from hydrogen and C1 - C4 alkyl. The invention also relates to methods that afford direct attachment of the cyanine dye reporter group to either the N-terminus or C-terminus of a synthetic or recombinant peptide or protein, and their derivatives, in a site-specific manner, coupled with purification of the resultant labelled molecule.

